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# Frames in the Ethiopian Debate on Biofuels

Brigitte Portner

**Abstract:** Biofuel production, while highly contested, is supported by a number of policies worldwide. Ethiopia was among the first sub-Saharan countries to devise a biofuel policy strategy to guide the associated demand toward sustainable development. In this paper, I discuss Ethiopia's biofuel policy from an interpretative research position using a frames approach and argue that useful insights can be obtained by paying more attention to national contexts and values represented in the debates on whether biofuel production can or will contribute to sustainable development. To this end, I was able to distinguish three major frames used in the Ethiopian debate on biofuels: an environmental rehabilitation frame, a green revolution frame and a legitimacy frame. The article concludes that actors advocating for frames related to social and human issues have difficulties entering the debate and forming alliances, and that those voices need to be included in order for Ethiopia to develop a sustainable biofuel sector.

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**Keywords:** Ethiopia, biofuel, agriculture, energy policy, sustainable development, international economic relations

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In the last decade, liquid biofuels from agriculture, or agrofuels, have been propagated worldwide as a carbon-neutral alternative to fossil fuels that creates jobs and thereby reduces poverty in rural areas in developing countries (FAO 2008). Critics, however, have objected that biofuels do not enable sustainable rural development but instead aggravate existing problems. Indeed, research has revealed that biofuel production can have significant negative impacts on, for example, food security (FAO 2008), land use rights (Cotula et al. 2007) and the environment (Scharlemann and Laurance 2008). Although biofuel production is a highly contested topic associated with various driving forces and diverging interests, the demand for biofuels is supported by a number of policies with different objectives, such as climate change mitigation, energy security and rural development. These policies, which include public incentives such as blending and consumption mandates as well as subsidies, are believed to be the main drivers of global investments in biofuel production<sup>1</sup> (DEFRA 2010; OECD-FAO 2009; HLPE 2011). Franco et al. (2010) highlight how alliances between the European Union and the biofuel industry lobbied for and promoted the development of biofuels in both the global North and South.

Consequently, private companies are seeking to expand their production and have invested heavily in other countries, particularly in the global South. To cover the global biofuel demand, most of these investors intend to export their product to markets where demand and prices are higher than in production countries. Over the last decade, the investment landscape experienced a diversification as the aviation industry, traditional oil companies and young innovative firms started growing biofuel feedstock (REN21 2011: 13).

The biofuel sector is thus becoming more and more complex as its actors, locations, flows and policies interweave and the boundaries between traditional sectors and industries dissolve. The sector's growing complexity and the rapidity with which it has evolved poses various decision-making concerns. On the one hand, knowledge about cause-and-effect relationships in biofuel feedstock production, processing, trade and use is still limited. On the other hand, in many places the development of the biofuel sector was too fast for governments to react adequately and in a timely fashion (Schoneveld et al. 2010; Sosovele 2010; Wang 2011; Neville and Dauvergne 2012).

In 2007, as one of the first sub-Saharan countries to do so (Jumbe et al. 2009), the Ethiopian government released the Biofuel Development and Utilisation Strategy of Ethiopia (FDRE 2007; henceforth referred to as the "Biofuel Strategy"), this occurring shortly after the first companies estab-

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1 Mandates are quantity instruments of policies. "Blending" refers to the share of petrol-based fuel that is replaced with biofuels, while "consumption" refers to the overall share of biofuels targeted by policies.

lished their feedstock plantations there. The aim of the strategy was to guide the associated demand toward sustainability (FDRE 2007). Since biofuel development in the country had only just begun, the policy debate was characterised by many uncertainties about possible impacts and outcomes, causing the stakeholders involved to root their argumentation in their individually perceived realities. Acknowledging that international demands are powerful drivers of biofuel development, I argue that more attention must be paid to the national contexts and to societal values if biofuels are to contribute to sustainable development because context, facts and values are always intertwined (Scoones et al. 2013: 470). Consequently, this contribution, through an interpretive research position using a frames approach, analyses the biofuel policy and debate that occurred in Ethiopia in the aftermath of the release of the Biofuel Strategy.<sup>2</sup>

## Approach and Methodology

Uncertainties and perceived realities in complex debates tend to produce simplifications and promote the importance of value-laden statements in explaining phenomena and legitimising these explanations (Hajer and Wagenaar 2003). This situation is common in debates related to sustainable development, as sustainable development is multidimensional and normative by nature and hence requires the negotiation of values among actors (Wiesmann 1998). Today it is widely acknowledged that achieving sustainable development requires the values, attitudes and behaviours of the actors involved to change (WBGU 2011). Moreover, it has been argued that sustainable development cannot be legitimised unless values are made transparent and discussed, as these normative elements define what people consider good or bad and what they perceive as desirable (Wilkins 2003). In other words, values are the foundation upon which society unites and negotiates how sustainable development is achieved (Mabogunje 2004; Raskin et al. 2002; Hurni and Wiesmann 2004).

Frames unite these values as an “organising principle which transforms fragmentary information into a structured and meaningful whole” (van Gorp 2002: 5). They determine how individuals perceive reality and how these perceptions shape normative rules for action (Fischer 2003). Frames

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2 I would like to thank Annika Salmi, Kaspar Hurni, Claudia Michel, Hans Hurni and two anonymous reviewers for their helpful comments on an earlier draft, as well as Marlène Thibault and Meenakshi Preisser for their text editing. This study was funded by the Swiss National Science Foundation ([www.snsf.ch](http://www.snsf.ch)) and conducted within the framework of the International Graduate School North-South ([www.igs-north-south.ch](http://www.igs-north-south.ch)).

are part of society: People tend to relate experiences to patterns they already know and which make social reality meaningful for them; over time these patterns become points of reference for the individual (Goffman 1981; Triandafyllidou and Fotiou 1998). Nevertheless, frames are subject to change and can be institutionalised in various ways (Goffman 1981: 63). The process of framing can thus be understood as a process of combining perceived realities into a narrative in order to promote, implicitly or explicitly, a certain interpretation.

In this paper, following Polletta and Ho (2006), I use frame analysis as a tool to capture the societal dimension of the contentious politics of Ethiopia's biofuel policy. My analysis relies on a typification of frames that was originally developed for news analysis, and according to which frames perform four functions: problem definition, causal analysis, moral judgement and remedy promotion (Entman 1993, 2004). This typification takes up different, equally important aspects in debates on sustainable development: societal perspectives on a given situation – as well as the explanation and valuation of these perspectives, along with the proposed solutions for the perceived problem.

The material I used includes both primary and secondary sources. I conducted 36 formal semi-structured interviews and various informal talks with government officials (6), researchers (5), campaigners and practitioners from non-governmental organisations (10), farmers (5), journalists (2), entrepreneurs (4), traders (2) and diplomats (2) in Ethiopia in 2008 (May/June) and 2009 (June/July and September/October). Secondary data, such as literature, news articles, conference presentations and videos were collected continuously. In addition, I gained valuable insights from observing and participating in workshops and conferences, both in Ethiopia and in Europe, between May 2008 and early 2012.

The material was coded in three steps: First, I categorised texts and statements by author/interviewee and their employer. This allowed me to group them into six main actor categories: government, academia, industry, non-governmental organisation (NGO), media and farmers. Second, I coded the material by theme and analysed how authors and interviewees associated the opportunities and challenges of biofuel production with the related policy, and in what context. The results of this content analysis are presented in the section titled “Dominant Themes in the Debate on Biofuel Production”. Third, I focused on the four aspects and related frame functions outlined above, and on how the various actor categories framed the themes; in this way, I was able to distinguish three major frames used in the Ethiopian



debate on biofuel policy. Wherever possible, I used citations from published sources to illustrate the analysis.<sup>3</sup>

## Current Status of Biofuel Investments in Ethiopia

The practice of purchasing or leasing land on a large scale has become known globally by the term “land-grabbing” (see, for example, Friis and Reenberg 2010). Although land deals are happening globally, the number of investments as well as the extent of areas affected is highest in the global South. Ethiopia is believed to be one of the countries with the highest rates of “land-grabbing” even though data on actual investments remain sparse (Anseeuw et al. 2012). Large-scale investments in Ethiopia’s agricultural sector are not an entirely new phenomenon, but the magnitude and corresponding capital inflow of such investments have increased greatly since 2006 (Weissleder 2009). Most of the projects focus on food crops; the share of projects focusing on biofuel feedstock and production is low (Cotula et al. 2009).

However, official statements regarding land areas granted for biofuel feedstock production in Ethiopia are contradictory. In 2008, the area of land acquisitions for biofuel feedstock in Ethiopia was estimated to total as much as 1.65 million hectares (Anderson and Belay 2008). A year later, in July 2009, this figure was confirmed by the Ethiopian government when it reported that it had demarcated 1.6 million hectares of land for investors aiming to develop commercial agricultural farms; it was later announced that a further 1.2 million hectares would follow suit (Tsegaye Tadesse 2009). These figures appeared to be understated, given that at the same time, also in July 2009, official data from the Ministry of Mines and Energy listed over 2 million hectares of land granted to a total of 64 biofuel investors who made an overall investment of over 380 million USD (MoME 2009).

To date, total land area authorised for biofuel feedstock production is believed to be about 500,000 hectares, but only a very small percentage (below 3 per cent) is planted with either castor or sugar cane (Locke and Henley 2013: 10-11; Land Matrix 2013). Many of the initial biofuel projects failed because of false expectations, mismanagement or lack of economic viability of the biofuel feedstock (Anderson and Belay 2008; Tibebwa Heckett and Negusu Aklilu 2008; Locke and Henley 2013). But information

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3 To ensure the anonymity of interviewees, they are cited only as “Interviewee”, followed by the actor group they belong to (for example, “Interviewee, NGO”).

on investments, lease terms and implementation has to be taken with caution, as reliable evidence is difficult to obtain (Edelman 2013; Oya 2013).

## The Evolution of Ethiopia's Biofuel Policy

To elucidate the scope of the debate, I will start with a historical overview of biofuel development in Ethiopia. Initial attempts to produce ethanol from sugar cane to blend with gasoline were made in 1979 (Negera Beshana 2008). However, commercial production of feedstock for ethanol and biodiesel did not start until almost thirty years later. In 2005, Sun Biofuels, a company that no longer exists, was the first to launch commercial biofuel production in Ethiopia. At that time, there was no debate yet in Ethiopia about the production and governance of biofuels. It took two more years until the next important milestone in the development of the Ethiopian biofuel sector was reached: the First High-Level Seminar on Biofuels, which was held in Addis Ababa in the summer of 2007. The seminar, which was jointly organised by the African Union Commission, the government of Brazil and the United Nations Industrial Development Organization, laid out a biofuel roadmap for African countries and can be considered the starting point of the biofuel debate in Ethiopia (IISD 2007).

The seminar participants adopted the Addis Ababa Declaration on Sustainable Biofuels Development in Africa and a ten-year Action Plan for Biofuels Development in Africa. The Declaration acknowledges the role of biofuels in developing the agricultural sector in rural areas; it calls for institutional frameworks at the regional and national levels, enhanced biofuel research and capacity development, and active participation in global sustainability discussions. Additionally, the Declaration placed emphasis on both North–South and South–South cooperation as well as on minimising the risks for small-scale producers (African Union Commission et al. 2007). The Action Plan was an attempt to implement the Declaration by identifying three immediate priority areas: 1) a focus on proven options relating to existing agro-industries, 2) regular resource assessments and 3) the establishment of a regional biofuels network (IISD 2007).

In Ethiopia, the seminar was criticised – mainly by environmental NGOs – because potential negative impacts of biofuel production were ignored and because Brazil's engagement in the seminar was based only on economic interests; Brazil was accused of wanting to export its own agro-technologies before African countries had the chance to develop biofuel roadmaps based on consultations and research (Tibebwa Heckett and Negusu Aklilu 2008). Many critics feared that African governments would react to the demand for biofuel development based on the purely economic inter-

ests of private companies and governments of foreign countries, such as Brazil's, which were more experienced in biofuel production.

The Biofuel Development and Utilisation Strategy of Ethiopia was issued in September 2007, shortly after the seminar. It was prepared by the Ministry of Mines and Energy, the Ministry of Trade and Industry and the Ministry of Agriculture and Rural Development together with Sun Biofuels. Other actors – for example, from Ethiopia's well-developed floricultural sector – were not involved, even though a focus on other agro-industrial branches had been defined as important in the Action Plan.

The Biofuel Strategy aims to boost agro-industrial biofuel production, to cover domestic demand in the transport sector and to export surplus production. Covering local household energy demand is not a goal of the Biofuel Strategy. "Biofuel development strategy and direction formulation [are ...] among the energy development efforts being carried out [to meet] the national economic development objective" (FDRE 2007: 7). Accordingly, the goals outlined in the Strategy are to replace imported fossil fuels and to export surplus production, thereby reducing Ethiopia's energy dependence, improving the currency balance and boosting economic development. This is to be achieved by promoting both biodiesel and ethanol, mainly from *Jatropha curcas*, castor, palm oil and sugar cane (FDRE 2007). Enhanced agricultural productivity, food security, poverty reduction and environmental rehabilitation are expected to follow this agro-industrial growth.

The Biofuel Strategy takes up the social, ecological and economic dimensions of sustainable development that have become commonly mentioned since the first Rio Summit in 1992, and emphasises that economic benefits must be distributed equitably, without compromising the ability of small-scale farmers and pastoralists to sustain their livelihoods. However, the three priority areas identified in the seminar – a focus on proven options, regular resource assessments and a regional biofuels network – are not included, nor does the Strategy contain any concrete instructions for implementation.

At the end of 2010, the Ethiopian government created a Biofuel Development and Coordination Directorate and moved the responsibility for national biofuel development from the Ministry of Mines and Energy to the newly established Ministry of Water and Energy. The Biofuel Development Coordination Directorate has the task of coordinating biofuel development programmes. It also heads the National Biofuel Forum, which was set up in 2008 and is responsible for advising, monitoring and evaluating national biofuel development. Most Forum members are from governmental institutions, and only one member represents an environmental NGO, the Forum



for Environment (Interviewees, NGO, Government). The Forum meets twice a year to report on the activities of the members' respective institutions (Meskir Tesfaye and Yonas Gebru 2011). Against this backdrop, in the next two sections I will present the results of my analysis of the Ethiopian debate on biofuel development.

## Dominant Themes in the Debate on Biofuel Production

Ethiopia was among the first sub-Saharan countries to devise a policy strategy in response to the increased demand for biofuels. Nevertheless, concerned stakeholders criticised the Ethiopian Biofuel Strategy for its several shortcomings, most of which are related to one or more of the following three topics: the types of biofuel feedstock, the availability of land, and the institutional framework.

### Biofuel Feedstock

Potentially negative impacts of biofuel feedstock production in Ethiopia are mainly associated with the production of biodiesel, whereas impacts of ethanol production are considered to be smaller and easier to handle, as the Ethiopian ethanol sector has already developed structures and gained experience with it (Legesse Gebremeskel and Meskir Tesfaye 2008: 63-64). Feedstocks that can be used for biodiesel, particularly *Jatropha curcas*, are thus more hotly debated, whereas sugar cane – currently the only feedstock used for producing ethanol in Ethiopia – is hardly debated.

While the small-scale production of *Jatropha curcas* has gone unchallenged, the plant's large-scale promotion has been seriously questioned, particularly by representatives from the industry and from NGOs. One interviewee called the *jatropha* hype “the Ja-trojan hope” (Interviewee, NGO), while another demystified *jatropha*'s purported advantages based on their organisation's own research:

The government's strategy is aiming for investment in pastoralist areas which are drylands. But this land is not suitable for *jatropha* or for any other biofuel crop. *Jatropha* is like any other crop, it needs good rainfall, drainage, fertiliser and pest control, otherwise it is economically not profitable. (Interviewee, Industry)

The previous statement touches on two important aspects of biofuel production: investment in pastoralist areas and the suitability of *Jatropha curcas* in these areas. Concerns that *jatropha* production in dryland areas would jeop-

ardise pastoralist livelihoods were not highlighted in public workshops. But fears emerged among scientists and environmental NGOs that biofuel investors would plant non-indigenous species that were economically more promising but could be invasive or negatively affect biological diversity at the investment sites:

Promoting the cultivation of some popular species for biofuel production may increase two of the major causes of biodiversity loss in the country: clearing and conversion of yet more natural areas for monocultures, and invasion by non-native species. (Rezene Fessehaie 2008: 75)

Aside from the potential threat to local livelihoods, flora and fauna, the lack of clear regulations concerning permitted biofuel feedstocks also gave rise to worries that foreign companies might be privileged over national ones:

There are a number of companies that have invested in castor production. Whereas there is seed legislation in Ethiopia, these companies are importing hybrid seed from China without any regulation. (Getinet Alemaw et al. 2008: 14)

## Land Availability

Land availability is the second-most prominently debated topic in biofuel production. The government of Ethiopia has calculated the potential area of land available for the production of biodiesel feedstock to be 23.3 hectares (Alemayehu Tegenu 2007), which amounts to approximately 25 per cent of the country's area. The Biofuel Strategy states that

Ethiopia is endowed with natural resources suitable for bio-diesel development. In this regard, at [the] national level, an estimated area of 23.3 million ha suitable land is available for development of bio-diesel. Regionally, the available land in million ha is: Oromia 17.2, Benishangul-Gumuz 3.1, Gambella 2.8, Somali 1.5, Amhara 1, Southern Nations Nationalities 0.05, Tigray 0.007. Statistical information for Afar and Harer is not available. It should be noted that there is [an] information gap in some of the regions; nevertheless, the potential is expected to be higher than the available record. (FDRE 2007: 8-9)

It is unclear how these figures were ascertained, and in some cases they are obviously wrong – most strikingly so in the case of Gambella, where the area indicated actually surpasses the total area of the region (Negusu Aklilu 2008: 126). Given the agro-ecological setting of the regions with so-called “available land”, it can be assumed that most of this space consists of forests and protected areas, in addition to bushland and pastures that are often used as commons and grazing areas by smallholders and pastoralists.

Indications that biofuel feedstock production is not economically viable on marginal land, together with the fact that the Strategy does not envision restricting the replacement of food crops by biofuel feedstocks, have raised the concern that biofuel companies might be targeting agricultural land that is currently in use. This, in turn, may have negative impacts on the environment and on food security:

In reality, biofuels businesses can hardly become sustainable and competitive on degraded lands. [... A]t present, fertile arable lands and virgin forests are being cleared and allocated for biofuels development without any consideration of the potential impact on the environment and consequences on food security. (Hilawe Lakew and Yohannes Shiferaw 2008: 39)

## Institutional Framework

Regulations in Ethiopia are very investor-friendly. They include tax exemptions, extremely low land-leasing rates of 2 to 10 USD per hectare, and long-term leasing agreements of up to 99 years (EIA 2009; Interviewee, Industry). The Ethiopian Investment Agency advertises itself as a “one-stop shop for all investors in Ethiopia”, and among other services offered it “facilitates the acquisition of land and utilities by foreign investors” (EIA 2009). This has attracted foreign, diaspora and domestic investors, of whom many have little or no experience in agriculture (Hilawe Lakew and Yohannes Shiferaw 2008). This naïve approach was fatal, as many of them were hit by the financial crisis. Combined with the lacking farming experience, many of the investors withdrew, leaving the land cleared and the local population to cope with the aftermath (Interviewees, Industry, NGO, and Media). Some informants also mentioned the concern that the lack of legal guidelines following the initial incentives may have unpredictable social, environmental and economic consequences, particularly for local populations but also for biofuel companies (Interviewees, Academia, Industry). Actors identified in the biofuel debate have called for measures to unveil the many uncertainties related to biofuel production in Ethiopia. They have argued for more empirical research to be conducted, as well as for capacity and specialised knowledge to be expanded in order to support evidence-based decision-making.

Biofuels are researched by many Ethiopian and international research institutions, but unfortunately there is no cooperation among them. This is a waste of resources and delays the availability of information concerning the impacts of biofuels. (Interviewee, Industry)

Moreover, much is unclear: What type of infrastructure is needed for the sustainable development of the biofuel industry, to what extent the biofuel companies should invest in public infrastructure such as roads and access to electricity, and whether national or international financial support for the Ethiopian biofuel development programme can be expected (Atakilt Beyene 2008; Melis Teka 2008). Actors thus point out that the institutional framework needs to be amended and harmonised.

The development of an integrated and enabling framework and close cooperation and consultation between several government departments as well as with the NGO and private sectors engaged in the promotion of liquid biofuels in Ethiopia are urgently necessary. (Legesse Gebremeskel and Meskir Tesfaye 2008: 63)

In addition to the call for more cross-sectorial adjustments and coordination between different governmental, private and non-governmental actors, there is a need for vertical harmonisation. The lack of coordination between administrative levels might lead to conflicts of interest and promote uncontrolled investments in cases where the same regional offices define the available land area and issue investment licences (Hilawe Lakew and Yohannes Shiferaw 2008).

Generally, the Biofuel Strategy and the related institutional set-up give the impression of being an incomplete and hastily launched reaction to the growing pressure from international actors. Moreover, the Strategy can be seen as an attempt by the Ethiopian government to attract investors. Environmental NGOs in particular claim that the Strategy lacks clear objectives or targets, leading to a decoupling of the principles it claims to have and their implementation on the ground; they also criticise the fact that the broader public was not involved in the decision-making process (Negusu Aklilu 2008). Many actors argue that this disconnection is due to 1) a lack of monitoring mechanisms to control the implementation of biofuel projects and measure their positive and negative impacts and 2) missing data that could inform decision-makers adequately (Atakilt Beyene 2008; Bekele Bayissa 2008; Hilawe Lakew and Yohannes Shiferaw 2008; Tibebeba Heckett and Negusu Aklilu 2008).

The declaration of the potentially available land area, the allocation of land to investors and the lack of monitoring of land deals have all been heavily criticised – by both national and international actors – for being intransparent, based on faulty data and disproportionately detrimental to rural indigenous communities and pastoralists. Indeed, the Strategy focuses on large-scale rural production and neglects small-scale production as well as urban areas; the potential of biofuels for urban and rural households is left unconsidered. A number of actors believe that local consumption of the

biofuels produced might benefit Ethiopia's development more than their export. Independence from large-scale economies and foreign earnings, lower transportation costs, and employment opportunities for smallholders and urban poor might stimulate development more than large-scale production and income from export (Atakilt Beyene 2008; Gebremedhin Birega and Yasin Botto 2008; Hilawe Lakew and Yohannes Shiferaw 2008).

## The Frames: Environmental Rehabilitation, Green Revolution and Legitimacy

The three frames underlying the themes presented above are environmental rehabilitation, the green revolution and legitimacy. The first two can be situated in the history of environmental policy discourses (for reviews, see Keeley and Scoones 2000; Abebe and Pausewang 1994) and are used by most actors in the Ethiopian biofuel debate, while the third frame emerged only recently and is almost exclusively used by governmental actors. The frames are nested entirely in each other – the environmental rehabilitation frame can be situated within the green revolution frame, which itself is part of the legitimacy frame.

Virtually all actors share the basic belief that a green revolution and modernisation are necessary to promote overall development in Ethiopia. Consequently, development efforts primarily consist of economic and ecological measures, while social development is believed to automatically follow economic and ecological development. Interestingly, critics and campaigners use the same frames, and all actors argue for the promotion of biofuels. It is the “how”, “when” and “by whom” that are contested.

The “environmental rehabilitation” frame forms the basis for the other frames. Although its main argument – that degraded lands need to be rehabilitated and natural resources conserved, because agriculture and development depend on them – is not very prominent in the debate on biofuels. I nonetheless view this frame as the common ground shared by all of the three frames. For development agents working at the local level, it is the most important frame. They see biofuel crops primarily as a possibility to halt, hinder and reverse land degradation. One reason why this frame is not very prominent at the national level is that the national debate focuses mainly on large-scale investments, whereas environmental rehabilitation is predominantly discussed in the context of small-scale cultivation. A second reason lies in the geographic focus of large-scale investments: They are promoted mainly in lowland areas inhabited by pastoralist communities, and pastoralists are not considered as small-scale farmers in the debate.



The “green revolution” frame with respect to biofuel production concentrates on agricultural productivity and unused land; access to land and food security; and the need for “modern scientific technical knowledge”. It is the most prominent frame in the debate, and it presumes that the main obstacle to Ethiopia’s development is non-productive, non-effective, non-sustainable livelihood strategies that have led to an expansion of the agricultural frontier and an overuse of natural resources. Climate change is seen as an additional factor that is putting pressure on the natural resource base. The dominant themes outlined above are taken up by two actor groups: those calling for an improvement in smallholders’ productivity and, simultaneously, for investments in biofuels on “marginal” lands, and those who believe that agricultural productivity for food crops needs to be increased before investing in biofuels.

Most actors argue that improving agricultural productivity and reducing food insecurity requires “modern scientific technical knowledge”; by contrast, they consider traditional farming practices as backward. Consequently, they call for educating and advising farmers. In the debate, local knowledge is not considered valuable and is even entirely ignored by most representatives of academia and government administrations, with few exceptions (e.g. Gebremedhin Birega and Yasin Botto 2008: 5). This view is prominent notably with respect to pastoral and agro-pastoral areas in the lowlands, where land is considered unused and under-used and thus available for irrigated and rainfed agriculture (Hagmann and Mulugeta 2008: 25). Pastoralist lifestyles are considered a hindrance to the spread of modern technologies, and are hence seen as a cause of poverty:

The scattered settlements and the traditions of the people might also be constraining factors for the proper utilisation of the energy resources. For instance, the high mobility of nomadic people prevents them from using biogas technology despite having large numbers of cattle. (Ephrem Hassen 2008: 21)

Exponents of this view hold that large-scale biofuel plantations could solve the problem by modernising pastoralists’ way of life and guiding them toward settled agriculture (Yohannes GebreMichael et al. 2010).

The “legitimacy” frame, finally, is exclusively used by government actors. Its argumentation is that Ethiopia is on the right track to overcome poverty and resource depletion. Biofuels are considered as a way to combine economic and environmental policy goals. Problems are attributed to traditional farming, including pastoralism and a lack of modern technologies, and to climate change. Overcoming these obstacles and achieving development goals is believed to require effective policies and strategies, which then need to be followed and consistently implemented. In practice, if all investors

followed the existing governmental guidelines – for example, conducting impact assessments prior to implementing biofuel feedstock plantations – the targeted goals would be achieved without negatively impacting the local smallholders or the environment.

Although actors using this frame do acknowledge that there are problems, they express the need for time and policy space to develop and implement appropriate measures. Former governmental biofuel coordinator Ephrem Hassen (2008: 21) states that

energy development in Ethiopia has been impeded by insufficient institutional set-up. The extent of the problem is not appreciated by all concerned parties and has not been seriously worked on.

Hassen further argues that alternative energy technologies have failed to spread because investors fear the costs and expect little profit in rural Ethiopia. Hence exponents of this frame argue that appropriate strategies will lead to access to these technologies, poverty alleviation, and food and energy security. From this perspective, the government has analysed the situation, identified the problem and now needs policy space and time to achieve these goals.

## Conclusions

The analysis of the Ethiopian biofuel policy debate in 2008 and 2009 showed that actors use three major frames: environmental rehabilitation, the green revolution and legitimacy. Both critics and advocates of the current policy use the same frames, and both support the promotion of biofuels. The need to conserve and rehabilitate natural resources, to improve access to energy and to develop rural areas in Ethiopia is not contested. What is disputed are the answers to the following questions: How should biofuels be produced: on small- or large-scale plantations? When should biofuel production start: immediately or only after agricultural productivity has increased enough to guarantee food security? Who should be the main producers of biofuel feedstock: smallholders or large-scale private investors? The same controversies can also be observed at the global level (see, e.g., Giger et al. 2008; White et al. 2012).

The identification of dominant themes in the biofuel debate illustrates that implementing and monitoring these processes is extremely demanding as it requires communicating and working across sectors and scales. This is a particularly challenging task in the case of biofuel development, which involves such diverse but cross-cutting issues as energy, agriculture, environment, land tenure, trade and investment. Nonetheless, more cross-sectorial

adjustments and coordination between different governmental, private and non-governmental actors, a vertical harmonisation and binding guidelines are urgently needed. In addition, careful monitoring both of land leases for feedstock production and of the implementation statuses of the associated projects would provide reliable data to assess positive as well as negative impacts.

But maybe the most relevant finding of this article is that critics and advocates use the same frames, which means that no counter-frames could be identified. The absence of counter-frames suggests that actors with different frames have difficulties accessing the debate and forming alliances. While official national documents do address main elements of sustainable development, in the larger national debate the social dimension is missing. Actors representing frames and arguments related to social and human issues seem to be marginalised, which may disproportionately affect small-holders and pastoralists. For the biofuel sector in Ethiopia, those voices need to be included in the debate if sustainable development is to succeed there. The usefulness of the Ethiopian Biofuel Strategy for sustainable development thus depends on institutional strengthening, the accuracy of available information, and the inclusion of all concerned actors from the local to the national level in the debate and the practical implementation.

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*N.B.: Following convention, Ethiopian authors are listed by their first name.*

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### ***Frames und die Biotreibstoffdebatte in Äthiopien***

**Zusammenfassung:** Obwohl die Produktion von Biotreibstoffen heftig umstritten ist, wird sie weltweit mit politischen Instrumenten gefördert. Als eines der ersten Länder Afrikas reagierte Äthiopien auf die steigende Nachfrage mit einer politischen Strategie, um den Biotreibstoffsektor mit dem Ziel nachhaltiger Entwicklung in Einklang zu bringen. Die Autorin des Beitrags untersucht die Biotreibstoffpolitik in Äthiopien anhand einer Rahmenanalyse und ermittelt das spezifische Werte- und Bezugssystem der äthiopischen Debatte, inwieweit Biotreibstoffe zur nachhaltigen Entwicklung des Landes beitragen können. Sie findet drei dominante Bezugsrahmen: Bewahrung der Umwelt, grüne Revolution und Legitimität. Akteure, deren Bezugsrahmen vor allem soziale und sozialpolitische Gesichtspunkte einschließt, hätten es demgegenüber schwer, sich an der Debatte zu beteiligen und mit den anderen Akteuren Allianzen zu bilden. Die Autorin plädiert dafür, auch diese Stimmen in die Debatte einzubeziehen, damit die Biotreibstoffproduktion in Äthiopien zukunftsfähig gestaltet werden kann.

**Schlagwörter:** Äthiopien, Biokraftstoff, Landwirtschaft, Energiepolitik, Nachhaltige Entwicklung, Internationale Wirtschaftsbeziehungen